

Abstract

Methods and apparatus for performing near lossless-concatenated N -level constrained quantization Hadamard transform decoding are provided. Accordingly, the present invention provides a transform-based coding technique, where the coding loss introduced during repeated encoding and decoding is reduced to a substantially insignificant level. This is accomplished by employing a constrained quantization and inverse quantization operation in each level of encoding/decoding in the decoder. In this manner, the concatenation error between each level of a decoder is reduced to a substantially minimum level and the quantization error introduced during quantization operations, i.e., originally at the encoder and in each level of the decoder, is substantially reduced. Thus, the decoded bit stream that is output at the N -th level of the decoder is substantially the same as the original bit stream provided to the input of the encoder.

1200-391.APP